



Wireless Towers

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Agenda

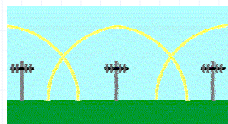
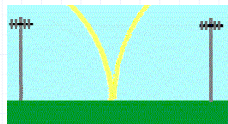


- ◆ Coverage Issues
- ◆ Reason for Sites
- ◆ Structure Options
- ◆ Wireless Enhanced 9-1-1
- ◆ Impact of sites on Public Safety

Coverage Issues



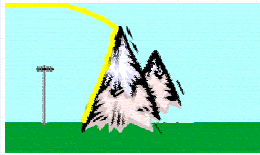
- ◆ Antenna Height
- ◆ Topography
- ◆ Obstruction



Coverage Issues



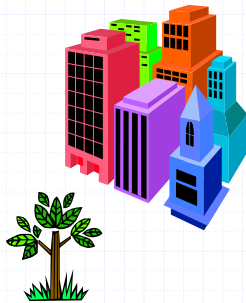
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Coverage Issues



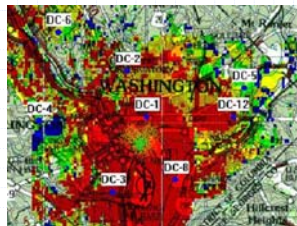
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- ◆ Obstructions



Reasons for Sites



- ◆ Propagation
 - 800 MHz
 - 1.9 GHz
- ◆ Capacity
- ◆ Business opportunity



Land Acquisition



- ◆ Engineers identify the area in which a new antenna is desired.
- ◆ Land acquisition identifies locations that could be used for an antenna.
 - Existing structures
 - Buildings
 - Land zoned for telecommunications
- ◆ Existing structures may not be usable.

Structure Options



Undesirable Results



Wireless Phase II



- ◆ Actual location of the caller
- ◆ Two types of location determination technology:
 - Handset-based solution
 - Network-based solution
- ◆ Network-based solutions are installed at the site locations.

Impact of Sites



- ◆ Some network based solutions require a minimum of 2 to 3 sites to be “visible” to the caller.
- ◆ Sites in a line makes location less accurate.



Impact of Sites



- ◆ Access to 9-1-1 relies on wireless telephone coverage.
- ◆ Wireless telephone coverage relies on cell sites.
- ◆ There is still a portion of Virginia without coverage.

Virginia Cell Towers

